

Hazards Identification and risk assessment of medical equipment at the Kowsar hospital in Qazvin in 2016

Abstract

Background and aim: In today's society, in which complex systems are often used, failure of a system or incidents can lead to disruptions at various levels, which is even considered as a threat to society and the environment. The purpose of this research was to identify and evaluate the risks of medical equipment at the radiology department of Kowsar Medical Education Center in Qazvin.

Maternal and Methods: This descriptive-analytic and descriptive-analytic study was conducted cross-sectional at Kowsar hospital in Qazvin. The authors initially reviewed authentic books and scientific articles and collected necessary information related to the research topic. Then, the responsible individuals and owners of data collection process were interviewed through direct observation method. The study setting consisted of all medical equipment at the Qazvin Kowsar hospital. Data gathering tools in this study were FMEA and PHA worksheets. Data were analyzed by descriptive statistics indices using Excel software.

Results: The results of this study conducted on fifty nine items of medical equipment at the Kowsar Hospital showed that the highest risk belonged to the X-ray tube of radiology and mammography devices with a RPN of 378. Centrifuge speedometer with a RPN of 16 revealed the lowest detected risk. Also, biological and electrical were the most and the least identified hazards, respectively.

Conclusion: Most of the identified risks can be prevented by the personnel and risk management requires more attention in the use of medical devices to improve care quality and effectiveness.

Keywords: Risks, Risk Assessment, Medical Equipment, FMEA, PHA.